

Using Lighthouse

Augmenting

Green points in the window represent selectable regions for augmentation. Hovering over a point will show a blue ellipse encompassing the region that will be augmented. Click on a green point will select that region for augmentation. A four-colored square will be augmented into the scene onto that region.

Configuring the System

The `./res/lighthouse.cfg` file contains the configuration used by the Lighthouse application. The MSER and SIFT parameters can be changed in this file. The camera can also be configured here. The camera type and pixel format can be set using the enumeration values found in `mar_camera.h`. The width and height can also be selected. Finally, the `dev_name` parameter can be used to set which camera device to use.

Editing Parameters

Parameters for the algorithms can be changed in real time to fine-tune the system. This is done by using one of the q, w, e, r, t, a, s, d, f, or g keys to selected which parameter to edit (see Controls section), and using the + or - key to increase or decrease the parameter value.

Controls

- : Decrease parameter value
- + : Increase parameter value

- q - Edit MSER Delta
- w - Edit MSER Min Area
- e - Edit MSER Max Area
- r - Edit MSER Max Variation
- t - Edit MSER Min Diversity

- a - Edit SIFT Number of Octaves
- s - Edit SIFT Number of Levels
- d - Edit SIFT First Octave
- f - Edit SIFT Peak Threshold
- g - Edit SIFT Edge Threshol

- m - Toggle SIFT keypoints
- n - Toggle MSER ellipses
- b - Toggle FPS
- n - Toggle selectable regions